REMARKS

Claims 1, 4-8, 10-15, 18, 20, 21, and 23-29 are pending. Claims 2-3, 9, 16-17, 19, 22, and 25 are currently canceled. Claims 7, 10-12, 20 and 21 have been withdrawn from consideration. Claims 1, 4-6, 8, 13-15, 18, and 23-29 are currently amended.

Entry of the amendments and reconsideration of the application are respectfully requested.

§ 102 / § 103 Rejections

Claims 1, 5, 6, 23, 25, and 26 are rejected under 35 USC § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Flam (US 3,661,142). Independent claims 1 and 23 have been amended. Dependent claim 25 has been cancelled. Applicants submit that pending claims 1, 5, 6, 23 and 26 are novel and nonobvious over this reference.

Claim 1 provides a thermally activatable removable adhesive tape comprising a film substrate having one or more individual layers, an adhesive layer disposed on at least one surface of the film substrate, and a temperature-indicating material disposed within or on the film substrate such that the temperature-indicating material experiences a color change when exposed to a color-changing temperature. The film substrate has an elastic modulus of at least 7.0×10^8 Pa at a temperature below an activation temperature ranging from about 25°C to about 100°C, an elastic modulus of not greater than 5.0×10^8 Pa at a temperature exceeding the activation temperature, and an elongation at break of at least 150% at a temperature exceeding the activation temperature. The film substrate comprises an aliphatic polyester, a polycaprolactone or combinations thereof.

Claim 23 provides a thermally activatable removable adhesive tape comprising a film substrate having one or more individual layers, an adhesive layer disposed on at least one surface of the film substrate, and a temperature-indicating material disposed within or on the film substrate such that the temperature-indicating material experiences a color change when exposed to a color-changing temperature equal to or greater than the activation temperature. The film substrate has an elastic modulus of at least 7.0×10^8 Pa at a temperature below an activation temperature ranging from about 25°C to about 75°C, an elastic modulus of not greater than 5.0×10^8 Pa at a temperature exceeding the activation temperature, and an elongation at break of at least 150% at a temperature exceeding the activation temperature.

Flam describes a temperature sensing patch which comprises a flexible backing web having a pressure sensitive adhesive coated on one side of the web for holding the flexible backing web in tight direct contact with underlying skin. A plurality of discrete temperature sensitive, color-responsive indicators are located on the opposite side of the flexible backing web (col. 2, lines 3 - 17 of Flam).

In regards to claim 1 of the present application, Flam does not disclose or suggest a thermally activatable removable adhesive tape having a film substrate comprising aliphatic polyester, polycaprolactone or combinations thereof, but rather teaches polyethylene terephthalate, polyvinyl chlorides, and polyolefins (col. 2, lines 43-48). Flam does not describe the film substrate having an elastic modulus and an elongation at break sufficient for the adhesive tape to be removable at or above the activation temperatures of the film substrate. Flam's teachings are limited to a flexible backing web containing encapsulated liquid crystals (col. 2, lines 37-65 of Flam). Flam does not teach or suggest the thermally activatable removable adhesive tape of claim 1.

In the Office Action, the Examiner asserts that polyethylene terephthalate is an aliphatic polyester (page 3, line 5). Applicants respectfully disagree with Examiner's assertion. Polyethylene terephthalate is known to those of skill in the art as an aromatic polyester. Polyethylene terephthalate is structurally and compositionally different than that of the aliphatic polyester of claim 1. Flam does not teach or suggest the aliphatic polyester of claim 1 for a thermally activatable removable adhesive tape.

In regards to claim 23, Flam does not teach or suggest a thermally activatable removable adhesive tape having a temperature-indicating material which experiences a color change when exposed to a color-changing temperature equal to or greater than the activation temperature of the film substrate. Rather, Flam teaches a plurality of discrete temperature sensitive, color responsive indicators, and is silent on their response to the activation temperature of the flexible backing web. Flam does not disclose the film substrate having an elastic modulus and elongation at break properties such that the adhesive tape is thermally activated at an activation temperature greater than 25°C to less than 75°C. Flam rather teaches polyethylene terephthalate as a flexible backing web and is silent on the relationship of the web to the elastic modulus and

elongation at break properties. Flam does not teach or suggest the thermally activatable removable adhesive tape of claim 23.

For at least the foregoing reasons, Flam does not disclose each and every feature of the present application. Applicants submit that the rejection of claims 1, 5, 6, 23 and 26 under 35 USC § 102(b) as being anticipated by Flam should now be withdrawn. Flam does not overcome the fundamental lack of a prima facie case of obviousness. Applicants request that the rejection of claims 1, 5, 6, 23 and 26 under 35 USC § 103(a) by Flam be withdrawn.

Claims 1 and 23 are rejected under 35 USC § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yukata et al. (machine translation of Abstract and Detailed Description of JP 2001-247828 previously provided). Independent claims 1 and 23 have been amended. Applicants submit that pending claims 1 and 23 are novel and nonobvious over this reference.

Claims 1 and 23 have been described.

Yutaka describes a reversible, temperature sensitive, color changing, pressure sensitive, adhesive tape comprising reversible thermochromic pigments fixedly dispersed in the tape substrate and a pressure sensitive adhesive laminated on one side of the tape substrate (abstract - page 1 of Yutaka).

In the Office Action, the Examiner asserts that Yukata discloses polyethylene terephthalate which reads on the film substrate comprising aliphatic polyester in claim 1. As previously described in Applicant's discussion of Flam, polyethylene terephthalate is not an aliphatic polyester, but rather an aromatic polyester. Yutaka does not teach or suggest the thermally activatable removable adhesive tape of claim 1.

In regards to claim 1, Yukata does not disclose or suggest the thermally activatable removable adhesive tape of the present application having a film substrate comprising an aliphatic polyester, polycaprolactone or combinations thereof. Rather, Yukata teaches polyethylene terephthalate, polyolefins and other polymers (page 2, para. 0005) as the film substrate. Yukata does not describe thermally activating the adhesive tape such that the elastic modulus of the film substrate changes at or above an activation temperature, but rather Yukata discloses a temperature sensitive, color changing adhesive tape and is silent on the elastic modulus properties at the

activation temperature. Yukata's teachings are limited to a flexible backing web containing adhered encapsulated liquid crystals.

In regards to claim 23, Yukata does not teach or suggest a thermally activatable removable adhesive tape comprising a temperature-indicating material which when exposed to a color-changing temperature equal to or greater than the activation temperature of the film substrate changes color. Yukata does not disclose the film substrate having an elastic modulus and an elongation at break properties such that the adhesive tape is thermally activated at an activation temperature in a range greater than 25°C to less than 75°C.

For at least the foregoing reasons, Yukata does not disclose each and every feature of the present application. Applicants submit that the rejection of claims 1 and 23 under USC § 102(b) as being anticipated by Yukata should now be withdrawn. Yukata does not overcome the fundamental lack of a prima facie case of obviousness. Applicants request that the rejection of claims 1 and 23 under 35 USC § 103(a) by Yukata be withdrawn.

§ 103 Rejections

Claims 1, 5, 6, 8, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/136702A). US 200410067331Al to Kuckertz et al. is relied upon as an equivalent for convenience. Independent claims 1 and 8 have been amended. Amended pending claims 5 and 6 are dependent on amended claim 1. Amended pending claims 13 and 15 are dependent on amended independent claim 8. Applicants submit that pending claims 1, 5, 6, 8, 13 and 15 are not made obvious by these references.

Claim 1 has been described.

Claim 8 provides a thermally activatable removable adhesive tape comprising a film substrate having one or more individual layers, and a first adhesive layer disposed on at least one surface of the film substrate. The film substrate has an elastic modulus of at least 7.0×10^8 Pa at a temperature below an activation temperature ranging from about 25°C to about 100°C, an elastic modulus of not greater than 5.0×10^8 Pa at a temperature exceeding the activation temperature, and an elongation at break of at least 150% at a temperature exceeding the activation temperature. The film substrate comprises aliphatic polyester, polycaprolactone or combinations thereof. The cited references do not recite the thermally activatable removable adhesive tape of claims 1 and 8.

Flam has been described. The addition of Kuckertz does not overcome the deficiencies of Flam (i.e. the addition of Kuckertz doesn't teach or suggest all of the claim limitations of the present application). Kuckertz describes biodegradable tear-off strips for biodegradable packaging materials having a monoaxially oriented biodegradable aliphatic polyester and/or copolyester. Further, Kuckertz does not teach or suggest the thermally activatable removable adhesive tape of claims 1 or 8.

In regards to claim 1, Kuckertz does not teach or suggest a temperature indicating material of the thermally activatable removable adhesive tape experiencing a color change when exposed to a color-changing temperature, and having a film substrate comprising an aliphatic polyester or caprolactam. Kuckertz rather discloses aliphatic polyester and/or copolyester tear strips, and is silent on the use of such polyesters in thermally activatable removable adhesive tapes. Therefore, claim 1 is not obvious over Flam in view of Kuckertz.

In regards to claim 8, Kuchertz does not teach or suggest a film substrate of a thermally activatable removable adhesive tape comprising an aliphatic polyester, a polycaprolactone, or a combination thereof such that the film substrate has an elastic modulus above and below an activation temperature, and an elongation at break. As described above, Kuckertz discloses the monaxially oriented aliphatic polyester and/or copolyester for biodegradable packaging materials. Kuckertz does not teach or suggest a thermally activatable removable adhesive tape being thermally activated and removable. Flam in view of Kuckertz does not teach or suggest all of the claim elements of claim 8 of the present application.

Flam in view of Kuckertz does not overcome the fundamental lack of a prima facie case of obviousness. Applicants request that the rejection of claims 1, 5, 6, 8, 13, and 15 under 35 USC § 103(a) as being unpatentable over Flam in view of Kuckertz be withdrawn.

Claims 4 and 24 are rejected under 35 USC § 103(a) as being unpatentable over Flam (US 3,661,142) as applied to claims 1 and 23, and further in view of Matveev et al. (abstract of SU 717201A). Pending claims 4 and 24 are dependent on amended independent claims 1 and 23, respectively. Because claims 1 and 23 are patentable for the reasons given above, it is believed that dependent claims 4 and 24 are also patentable. Applicants request that the

rejection of claims 4 and 24 under 35 USC § 103(a) as being unpatentable over Flam and further in view of Matveev be withdrawn.

Claims 4 and 14 are rejected under 35 USC § 103(a) as being unpatentable over Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A) as applied to claims 1, 8, and 13, and further in view of Matveev et al. (abstract of SU 717201A). Pending claims 4 and 14 are dependent on amended independent claims 1 and 8, respectively. Since claims 1 and 8 are patentable for the reasons given above, it is believed that dependent claims 4 and 14 are also patentable. Applicants request that the rejection of claims 4 and 14 under 35 USC § 103(a) as being unpatentable over Flam in view of Kuckertz and further in view of Matveev be withdrawn.

Claims 18, 27, and 29 are rejected under 35 USC § 103(a) as being unpatentable over Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A) as applied to claim 8, and further in view of Kreckel et al. (US 5,516,581). Amended pending claim 18 is dependent on amended independent claim 8. Amended pending claim 29 is dependent on amended independent claim 27. Applicants submit that pending claims 18, 27 and 29 are not made obvious by these references.

Claim 27 provides a thermally activatable removable adhesive tape comprising a film substrate having one or more individual layers, an adhesive layer disposed on at least one surface of the film substrate, a temperature-indicating material disposed within or on the film substrate such that the temperature-indicating material experiences a color change when exposed to a color-changing temperature, and a foam layer disposed on at least one surface of the adhesive layer opposite the surface adjacent to the film substrate. The film substrate has an elastic modulus of at least 7.0×10^8 Pa at a temperature below an activation temperature ranging from about 25°C to about 100°C, an elastic modulus of not greater than 5.0×10^8 Pa at a temperature exceeding the activation temperature, and an elongation at break of at least 150% at a temperature exceeding the activation temperature.

Flam and Kuckertz have been described. The addition of Kreckel doesn't overcome the deficiencies of Flam and Kuckertz. Flam is silent regarding a foam layer of a thermally activatable removable adhesive tape. Kreckel describes a removable adhesive tape comprising a

highly extensible and substantially inelastic backing and a layer of pressure sensitive adhesive. In regards to claim 27, Kreckel doesn't teach or suggest a thermally activatable removable adhesive tape film substrate having a film substrate with an elastic modulus above and below an activation temperature, and an elongation at break exceeding the activation temperature. Kreckel does not teach or suggest a temperature indicating material of the thermally activatable removable adhesive tape.

Flam in view of Kuckertz and further in view of Kreckel does not overcome the fundamental lack of a prima facie case of obviousness. Applicants request that the rejection of claims 18, 27 and 29 as being unpatentable over Flam in view of Kuckertz and further in view of Kreckel be withdrawn.

Claim 28 is rejected under 35 USC § 103(a) as being unpatentable over Flam (US 3,661,142) in view of Kuckertz et al. (WO 02/36702A) and Kreckel et al. (US 5, 516,581) as applied to claim 27, and further in view of Matveev et al. (Abstract of SU 717201A). Amended claim 28 is dependent on amended independent claim 27. Since claim 27 is patentable for the reasons given above, it is believed that dependent claim 28 is also patentable. Applicants request that the rejection of claim 28 under 35 USC § 103(a) as being unpatentable over Flam in view of Kuckertz and Kreckel, and further in view of Matveev be withdrawn.

CONCLUSION

In view of the above, it is respectfully submitted that claims 1, 4-6, 8, 13-15, 18, 23, 24, and 26-29 are in condition for allowance. If any issues or questions remain, the resolution of which the Examiner feels would be advanced by a conference with the Applicant's agent, the Examiner is invited to contact the agent at the telephone number noted below.

Respectfully submitted,

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